Introduction and objectives: Infrainguinal bypass surgery (BPG) is accompanied by significant 30-day mortality and morbidity, including early graft failure. The goal of this study is to identify patient- and procedure-specific factors which predict the rate of early graft failure in contemporary practice.

Methods: Data was obtained from the private sector National Surgical Quality Improvement Program, a prospective, validated database collected between 2005 and 2008 from 211 hospitals, using primary and modifier Current Procedural Terminology codes for BPG. The primary endpoint was graft failure at 30 days. Procedural parameters, patient demographics and clinical variables were analyzed by univariate and multivariate methods.

Results: There were 9217 BPG procedures (limb salvage, 49%; infrapopliteal distal anastomosis, 43%; prosthetic 32%) with patient variables: age 67 ± 12 years, male 64%, diabetes 44%, dialysis 7.4%. Mortality was 2.4%, major morbidity was 17.3%, and graft failure rate was 6.3% at 30 days. Multivariate predictors of graft failure demonstrated correlation (p-value, OR) with female gender ($p = 0.0054$, 1.29), limb salvage indication ($p < 0.0001$, 1.60), infrapopliteal anastomosis ($p < 0.0001$, 2.15), composite graft ($p = 0.0436$, 1.82), current smoking ($p = 0.0007$, 1.36), impaired sensorium ($p = 0.0075$, 2.13), emergency procedure ($p < 0.0001$, 2.03), previous vascular procedure ($p = 0.0005$, 1.39), and platelets >400K ($p = 0.0019$, 1.49). High-risk composite constructs utilizing these significant predictive factors can identify cohorts of patients with up to a 98-fold increase in odds of early graft failure.

Conclusions: These results describe common risk factors that correlate with early graft thrombosis including the unique description of its association with thrombocytosis. Additional risk factors thus identify a subset of patients who are at highest risk for early BPG failure. This data may be used to refine patient selection.

Cost and Effectiveness of Laser with Phlebectomies Compared with Foam Sclerotherapy in Superficial Venous Insufficiency. Early Results of a Randomised Controlled Trial

Lattimer C.R., Azzam M., Kalodiki E., Shawish E., Trueman P., Geroulakos G. Eur J Vasc Endovasc Surg 2012;43:630-6.

Objectives: Quantify endovenous laser ablation (EVLA) with concurrent phlebectomies and ultrasound-guided foam sclerotherapy (UGFS) in cost and effectiveness at 3 weeks and 3 months.

Design: Single-centre, prospective, randomised controlled trial.

Patients: One hundred patients (100 legs), C_{2-6}, age 21–78, M:F 42:58, with primary varicose veins received either EVLA under local anaesthetic or UGFS.

Methods Assessments included duplex, Aberdeen varicose vein questionnaire (AVVQ), venous clinical severity score (VCSS), venous filling index (VFI), visual analogue 7-day pain score and analgesia requirements. Additional treatments with UGFS were performed, if required. Micro-costing, using individually timed treatments, was based on consumables, staff pay and overheads.

Results: Changes in AVVQ, VCSS and VFI values (3 months) did not demonstrate any significant difference between groups. At 3 months, the above-knee GSV occlusion rate (without co-existing reflux) was not significantly different between the groups (74% vs 69%; EVLA vs UGFS; $P = .596$). Of the 9 haemodynamic failures in each group, 7 EVLA patients and 4 UGFS patients had co-existing cross-sectional above-knee GSV occlusion at some point. However, UGFS significantly outperformed EVLA in cost, treatment duration, pain, analgesia requirements and recovery.

Conclusions: UGFS is 3.15 times less expensive than EVLA (£230.24 vs £724.72) with comparable effectiveness but 56% (versus 6%) required additional foam (ISRCTN:03080206).